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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/511,293

10/14/2004

Tetsuto Tamura

NIWA

2392

7590

05/25/2006

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EXAMINER

SUERETH, SARAH ELIZABETH

ART UNIT

PAPER NUMBER

3749

DATE MAILED: 05/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/511,293	Applicant(s) TAMURA, TETSUTO	
	Examiner Sarah Suereth	Art Unit 3749	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1/31/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed January 31, 2005, fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. It has been placed in the application file, but the information referred to therein has not been considered.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tetsuto (Japanese Publication Number 11-082940).

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4. Tetsuto discloses: a cylindrical burner main body with an inner (9), intermediate (10) and outer section (11) having a combustion path on its central axis; a fuel filling nozzle unit (1) arranged at a base of said burner main body, wherein a tip nozzle of said nozzle unit is arranged to face a base of said combustion path (Figure 1); first and second combustion chambers formed ahead of said nozzle unit (8); a plurality of first air ejecting ports circularly arranged so as to surround said first combustion chamber and facing to said combustion path so as to form a swirling combustion flow section (5); a narrowly drawn shock wave conversion section for raising a flow rate of combustion gas up to more than the sonic speed formed as a tip hole of said circular burner main body (located at numeral 8C).

Tetsuto, as discussed above, discloses the invention as claimed with the exception of a second set of air injecting ports.

The courts have held that duplication of parts for amplified effect has no patentable significance (In re Harza, 274 F.2d 669, 124 USPQ 378 (CCPA 1960)). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Tetsuto apparatus by inserting another set of air injection ports in order to increase the rate that the air and fuel mix together (Operation section, lines 2,3).

Regarding claim 2, element (18) is an ignition nozzle unit, arranged so that the tip is bent towards the tip of the fuel filling nozzle unit (1) so as to eliminate influence from said swirling combustion flow section (Figure 1).

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Regarding claim 3, said base of said burner main body is formed as a circular base plate (8A) to which a plurality of air importing pipes (6) are attached outwardly; the other ends of said air importing pipes are communicated with an air distribution circular pipe unit which is connected to a high pressure combustion air supply means (4); and said circular base plate is connected to a high pressure air passage (arrows inside elements 9,10,11) arranged around a cylindrical portion of said burner main body so as to eject required respective amounts of supplied air to said air passage from air ejecting ports.

Regarding claim 5, the air injecting holes (5) are formed as holes in the nozzles directing ahead (Figure 1), and have equal pitch.

Conclusion

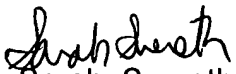
The prior art made of record on the attached form PTO-892 and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sarah Suereth whose telephone number is (571) 272-9061. The examiner can normally be reached on Monday to Thursday 7:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ehud Gartenberg can be reached on (571) 272-4828. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Sarah Suereth
Examiner
Art Unit 3749



EHUD GARTENBERG
SUPERVISORY PATENT EXAMINER